

Mitigation Measures for Review of Environmental Factors

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Document Control

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Version History

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Appendix 1 Mitigation Measures

Project Name: Orange Grove Public School Upgrade
REF: Orange Grove Public School Upgrade
Version Number: 9
Date: 15/06/2026

ID	MM Name	Mitigation Measure	Timing
General			
G1	Approvals	These Mitigation Measures do not remove the obligation to obtain all other licences, permits, approvals and consents as required under any other legislation.	Throughout
G2	Australian Standards	All works must comply with the relevant National Construction Code and Australian Standards.	During Construction
G3	Crown Certificate	A Crown Certificate under Section 6.28 of the <i>Environmental Planning and Assessment Act 1979</i> must be obtained for any Crown building work.	Prior to commencement of Construction
G4	Landowners Consent	Landowner's consent must be obtained in writing from the relevant landowner or authority.	Prior to commencement of Construction on that land
G5	Preschools	Not used	
Community Engagement			
CE1	Work Commencement Notification	DoE's Post Approval and Compliance Team, the relevant Local Council and the occupiers of any land within 20 metres of the site boundary must be notified in writing of the commencement of construction for the project. The notice must outline the works to be undertaken, and the proposed commencement date and expected completion date of construction works.	Minimum of 48 hours prior to commencement of Construction
CE2	Site Notice Board	A site notice board must be installed at eye level at the entrance or other appropriate, prominent and public facing location at the site. The site notice must be displayed throughout the construction period, be durable, weatherproof and include the following information: (a) 24-hour contact person for the site	Prior to commencement of Construction

ID	MM Name	Mitigation Measure	Timing
		(b) telephone number and email address of the contact person for the site (c) site works and timeframes (d) details of where accessible project information can be sourced.	
CE3	Complaints Handling	All complaints must be managed in accordance with DoE's Stakeholder and Community Participation Plan.	During Construction
Planning Compliance			
PC1	Mitigation Measures Induction	All contractors and their subcontractors must be made aware of these Mitigation Measures, any construction management plans required by these Mitigation Measures, and the requirement to undertake the activity as per these Mitigation Measures. Evidence of this must be recorded in a Site Induction Register.	During Construction
PC2	Non-compliance Notification	As soon as practicable after becoming aware of a non-compliance, all non-compliances with a Mitigation Measure must be notified in writing to the Accountable Lead and DoE's Post Approval and Compliance Team using DoE's Non-Compliance Notification Form.	During Construction
PC3	Incident notification	Any pollution incident must be notified immediately in writing to the Accountable Lead and DoE's Post Approval and Compliance Team using DoE's Incident Notification Form. Anyone engaged in an activity that results in a pollution incident has a duty to report it under the <i>Protection of the Environment Operations Act, 1997</i> .	During Construction
PC4	Independent Audit Program	A risk-based program of independent audits must be developed by the independent auditor for the work, having regard to the <i>AS/NZS ISO 19001-2019 Guidelines for Auditing Management Systems</i> . The timing of construction audits is to be twelve (12) weeks after the commencement of construction and every twenty-six (26) weeks thereafter until construction has been completed. The independent audit program is to be provided to the Accountable Lead and DoE's Post Approval and Compliance Team.	Prior to commencement of Construction
PC5	Independent Audits	The Independent Audits must be carried out in accordance with the approved audit program (PC4) and undertaken by suitably qualified personnel independent to the works. Audits must be documented in an Audit Report which: (a) Assesses how the Mitigation Measures are being satisfied (b) Outlines the adequacy of any documents required under the Mitigation Measures (c) Outlines the performance of the works with respect to any impacts on the surrounding	During Construction

ID	MM Name	Mitigation Measure	Timing
		environment and local community (d) Recommends any measures or actions to improve the performance of the works, if deemed required. Each Audit Report must be finalised within four (4) weeks from the auditor's site inspection or where an alternative timeframe is agreed to by DoE's Post Approval and Compliance Team. Each Audit Report is to be provided to the Accountable Lead and DoE's Post Approval and Compliance Team within seven (7) days of completion of the report.	
PC6	REF Compliance Status Report	The Accountable Lead must submit a REF Compliance Status Report to DoE's Post Approvals and Compliance Team demonstrating compliance with the Mitigation Measures and identifying all Mitigation Measures that have not been closed and need ongoing compliance during Operations.	Minimum 48 hours prior to commencement of Operations
Construction			
C1	Preparation of Construction Environmental Management Plan	A Construction Environmental Management Plan (CEMP) must be prepared, having regard to the <i>Environmental Management Guidelines for Construction Procurement (Edition 4)</i>, and must include: (a) Details of: (i). hours of work (ii). 24-hour contact details of site manager (iii). all specific environmental construction Mitigation Measures detailed in the REF and Decision Statement (iv). any requirements outlined in any relevant approvals, permits, licences or landowner consents (v). community consultation and complaints handling process in line with DoE's Stakeholder and Community Participation Plan (vi). emergency management processes (vii). training and site induction requirements, including heritage site inductions under the <i>National Parks and Wildlife Act 1974</i> and <i>Heritage Act 1977</i> (where relevant) (b) Environmental Control Map, including, where relevant: (i). aerial Site Plan showing the location of works (ii). construction site access and egress (iii). site compound (iv). site worker parking	Prior to commencement of Construction

ID	MM Name	Mitigation Measure	Timing
		(v). environmentally sensitive areas ('no go' areas for threatened species, endangered communities and tree protection zones) (vi). location of spill containment kit, chemical storage and refuelling area (vii). heritage items (viii). contamination areas. (c) The following Plans: (i). Erosion and Sediment Control (refer to Mitigation Measure SW1 for further details) (ii). Construction Traffic and Pedestrian Management (refer to Mitigation Measure TA2 for further details) (iii). Construction Noise and Vibration Management (refer to Mitigation Measure NV1 for further details) (iv). Construction Waste Management (including details on contaminated waste) (v). Construction Air Quality and Dust Management (vi). Construction Soil and Water Management (vii). Aboriginal/Non-Aboriginal Heritage Management (d) Construction Tree Protection Plan Unexpected finds protocol for Aboriginal and non-Aboriginal heritage (refer to Mitigation Measure H1, H2 and H3 for further details) (e) Unexpected finds protocol for contamination (refer to Mitigation Measure LC4 for further details)	
C2	Update and implementation of CEMP	The Construction Environmental Management Plan, and associated Plans, must be reviewed every 6 months, updated if necessary and implemented.	During Construction
C3	Construction Fencing	Construction site fencing is to be installed around the site. Construction vehicle and pedestrian access points to and from the site are to be clearly designated, signposted and controlled for authorised access only.	Prior to commencement of Construction
C4	Use and storage of Hazardous Materials	The use and storage of hazardous materials and dangerous goods, including petroleum, distillate and other chemicals, must be in accordance with the relevant legislation including, but not limited to: • <i>Protection of the Environment Operations Act 1997</i>; • Work Health and Safety Regulation 2017; • AS 1940:2017 The Storage and Handling of Flammable and Combustible Liquids; and	During Construction

ID	MM Name	Mitigation Measure	Timing
		Safe Work NSW Code of Practice – Managing Risks of Hazardous Chemicals in the Workplace.	
C5	Spill Kits	A spill containment kit must be available at all times. All personnel must be made aware of the location of the kit and trained in its effective deployment.	During Construction
C6	Construction Materials and Waste	All construction materials must be wholly contained within the construction site. The requirements of the <i>Protection of the Environment Operations Act 1997</i> are to be complied with when placing and stockpiling construction and waste materials, when disposing of waste products and during any other works likely to pollute drains or watercourses. All waste must be classified in accordance with the <i>Waste Classification Guidelines: Part 1 Classifying Wastes (EPA 2014)</i> and transported to a suitably licensed waste facility.	During Construction
C7	Designated Washout	Building methods such as brick cutting, mixing mortar and the washing of tools, paint brushes, form-work and concrete trucks must be undertaken in the construction site at a designated washout area located to prevent air, land or water pollution.	During Construction
C8	Construction Lighting	All construction lighting must not cause a nuisance to adjoining neighbours and comply with <i>AS/NZS 4282:2019 Control of the Obtrusive Effects of Outdoor Lighting</i> .	During Construction
C9	Construction Hours	The undertaking of any construction work, including the entry and exit of construction and delivery vehicles at the site, is restricted to the following standard work hours: (a) Monday to Friday inclusive: Between 7.00am to 6.00pm; (b) Saturday: Between 8.00am to 1.00pm; and (c) Sunday and Public Holidays: No work permitted. Vehicle movements must be managed to prevent early arrivals and associated noise impacts on surrounding sensitive receivers. Heavy vehicles must not idle, queue, or be parked near the site outside these construction hours. Where noise levels are not expected to exceed the existing background noise level plus 5dB, and noise monitoring is undertaken in accordance with the <i>Approved Methods for Measurement and Analysis of Environmental Noise in NSW (EPA, 2022)</i>, works may also be undertaken during the following additional work hours: (d) Mondays to Friday inclusive: Between 6:00pm to 7:00pm; and	During Construction

ID	MM Name	Mitigation Measure	Timing
		(e) Saturday: Between 1:00pm to 6:00pm. Construction work may be undertaken outside of the standard and additional work hours, but only if notification has been given to the occupiers of any land within a minimum of 80 metres of the site boundaries before undertaking the work or as soon as is practical afterwards, and only if it is strictly required: (f) By the police or a public authority for the delivery of vehicles, plant or materials; or (g) In an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or a) Where the works are completely inaudible at the nearest sensitive receiver; or (h) For the delivery, setup and removal of construction cranes, where notice of the crane related works is provided to Council and affected residents at least seven (7) days prior to the works; or (i) Maintenance and repair of public infrastructure where disruption to essential services, required system conditions (such as low-flow conditions for sewers) and/or considerations of worker safety do not allow work within standard construction hours; or (j) Accountable Lead approves the Contractor's justified request for public infrastructure works where works are outside the standard work hours and is supported by the affected community to shorten the length of construction works; or (k) where it is demonstrated and justified for the need to work outside the standard construction hours. Except in emergencies, these circumstances are not to be interpreted as an endorsement of work outside the recommended standard hours and must be justified in each case. Work schedule convenience or project expedience is not considered sufficient justification.	
C10	Construction Hours for Noise-intensive Works	Use of any rock excavation machinery, sheet piling, pile driving or jack-hammering and the like is restricted to the following hours: (a) Monday to Friday inclusive: 9:00am to 12:00pm; (b) Monday to Friday inclusive: 2:00pm to 5:00pm; (c) Saturday: 9:00am to 12:00pm; and (d) Sunday: no work permitted. If frequent noise exceedance is required, then additional respite periods during the school day to limit impacts to student learning should be agreed with the school.	During Construction
C11*	Demolition	Any demolition work must be undertaken in accordance with the provisions of Australian Standard	Construction

ID	MM Name	Mitigation Measure	Timing
		AS 2601-2001 The Demolition of Structures.	
Utilities and Infrastructure			
UI1	Pre-Construction Dilapidation Report	A Pre-Construction Dilapidation Report must be prepared by a suitably qualified person and submitted to Council, DoE's Heritage Team, relevant asset/service infrastructure owners and the Accountable Lead. The report must provide an accurate record of the existing condition of adjoining private properties and asset/ service infrastructure that are likely to be impacted by the works (and that have agreed to an offer for a dilapidation survey). Where works may affect a heritage item(s), the report must provide an accurate record of the condition of fabric for the heritage item(s).	Prior to commencement of Construction
UI2	Post-Construction Dilapidation Report	A Post-Construction Dilapidation Report must be prepared by a suitably qualified person and submitted to Council, DoE's Heritage Team, relevant asset/service infrastructure owners and the Accountable Lead. The report must determine whether the construction work has resulted in any structural damage to items assessed in the Pre-Construction Dilapidation Report. If the report determines that there is damage that has occurred as a result of construction works, the damage must be repaired or the full cost of repairs covered, within a timeline agreed with the property owner.	Prior to commencement of Operations
UI3	Dial Before You Dig	"Before You Dig Australia" must be used to obtain a Service Diagram to identify the location of underground utilities at the site.	Prior to commencement of Construction
UI4	Service and Utility Disconnection	All services and utilities in the construction area must be appropriately disconnected and reconnected as required, in consultation with the relevant authorities.	During Construction
UI5	Service and Utility Augmentation	Where existing services or utilities are found not to be adequate to support the works, appropriate augmentation must be undertaken, subject to obtaining any required approvals or permits.	During Construction
UI6	No Obstruction of Public Way	Building materials, machinery, vehicles, refuse, skip bins or the like must not be stored or placed in the public way (outside of any approved construction works zone) under any circumstances.	During Construction
Traffic and Access			
TA1	School	A School Transport Plan (STP) must be prepared to the satisfaction of DoE's Transport Planning	Prior to

ID	MM Name	Mitigation Measure	Timing
	Transport Plan	Team. If the school already has a School Transport Plan, the existing plan is to be reviewed and updated to reflect the impacts of the REF Activity, to the satisfaction of DoE's Transport Planning Team. A copy of the School Transport Plan is to be provided to the Accountable Lead and DoE's Transport Planning Team for implementation during Operations.	commencement of Operations
TA2	Construction Traffic and Pedestrian Management	A Construction Traffic and Pedestrian Management Plan (CTPMP) must be prepared to: (a) ensure heavy vehicle movements are safe and minimise disruption to the school and surrounding areas (b) outline strategies and measures to manage how construction workers access the site	Prior to commencement of Construction
TA3	Pedestrian Access	Safe pedestrian access around the construction site must remain unimpeded at all times. Required informative signage and directional information must be provided in appropriate locations ensuring pedestrian safety. Where necessary, traffic control measures must be implemented.	During Construction
TA4	Design of Road Safety Measures	Not used.	
TA5	Implementation of Road Safety Measures	Not used.	
Noise and Vibration			
NV1	Construction Noise and Vibration	A Construction Noise and Vibration Management Plan must be implemented in accordance with the NSW EPA Interim Construction Noise Guideline (2009).	During Construction
NV2	Vibration During Construction	Vibration levels induced by demolition activities, or other vibration intensive activities such as rock hammering, must be in accordance with the <i>AS2436 – Guide to Noise and Vibration Control on Construction, Demolition and Maintenance Sites</i> . The operation of plant and equipment must not give rise to the transmission of vibration nuisance or	During Construction

ID	MM Name	Mitigation Measure	Timing
		damage to other premises. Prior to commencement of vibration-generating activities, a specific vibration monitor must be set up either at the property boundary or nearest sensitive receiver to monitor and record the vibration levels affecting buildings on adjacent land using the <i>Assessing Vibration: A Technical Guide (DECC, 2009)</i>.	
NV3	Operational Noise	A suitably qualified acoustic engineer must demonstrate that noise associated with the operation of mechanical plant or machinery installed does not exceed the relevant project noise trigger levels.	Prior to commencement of Operations
NV4*	Acoustic Compliance	Compliance with the recommendations of the Environmental Noise Assessment prepared by Day Design Pty Ltd, dated April 2026.	Design
NV5*	Acoustic Compliance	Compliance with the recommendations of the Internal Acoustics Assessment Report prepared by Day Design Pty Ltd, dated April 2026.	Design
NV6*	Acoustic Compliance	Compliance with the recommendations of the Noise Intrusion Assessment prepared by Day Design Pty Ltd, dated April 2026.	Design
NV7*	Construction Noise and Vibration	For any heritage structures predicted to exceed the screening level 2.5 mm/s peak component particle velocity (from German Standard DIN 4150: Part 3-1999.02 Structural vibration in buildings - Effects on Structures) would be investigated during detailed design, and appropriate construction vibration criteria for the structure should be adopted.	During Construction
NV8*	Operational Noise	Waste collection is to be scheduled outside of school hours and only during the day (7am to 6pm)	Operation
NV9*	PA System	The noise level of the public address (PA) system is to be assessed by a suitably qualified Acoustic Engineer, prior to recommending a noise limiter. The PA system must not exceed the relevant project noise trigger levels.	Operation
NV10*	Operational Noise	Fire pump maintenance is to be scheduled in accordance with AS1851-2012, and is to occur outside of school hours and only during the day (7am to 6pm).	Operation
Land Contamination			
LC1	Remediation and Site Auditor	Remediation of known contaminated land is to be carried out in accordance with the requirements of the Remediation Action Plan (RAP). Following completion of the remediation works, a Site Remediation and Validation Report is to be submitted to a NSW EPA-Accredited Site Auditor to	Prior to commencement of Operations

ID	MM Name	Mitigation Measure	Timing
	Requirements	confirm site suitability through a Site Audit Statement. The site suitability statement and Site Remediation and Validation Report is to be submitted to the Accountable Lead and DoE's Post Approval and Compliance Team. A notice of completion of remediation work must also be given to Council within 30 days of completion of the work in accordance with Section 4.14 and Section 4.15 of <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> . The Site Audit Statement is also to be provide to the Accountable Lead and DoE's Post Approval and Compliance Team	
LC2	Category 2 Remediation	For any Category 2 remediation work, all regulatory notifications must be provided, including Notification of Category 2 Remediation Works to Council. Notice must be given in accordance with <i>Section 4.13 of State Environmental Planning Policy (Hazards and Resilience) 2021</i> .	At least 30 days prior to commencement of any Category 2 remediation work
LC3	Asbestos Handling and Removal	Where asbestos or asbestos-containing material is to be disturbed or uncovered, compliance with SafeWork NSW requirements must be adhered to. Asbestos must be removed by a suitably qualified and experienced contractor, licensed by SafeWork NSW. The removal of such material must be carried out in accordance with the <i>Department of Education Asbestos Management Plan</i> and <i>Asbestos Management Procedures</i> as well as the requirements of SafeWork NSW and the material transported and disposed of in accordance with NSW Environment Protection Authority requirements and the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> with particular reference to Part 7 'Transportation and Management of Asbestos Waste'.	During Construction
LC4	Unexpected Site Contamination	Should any unexpected contamination information or contaminants be identified which have the potential to alter previous site contamination assessments, conclusions and recommendations, the Accountable Lead must be immediately notified, and works must cease in the location of the contamination. Works must not recommence until a suitably qualified and experienced contamination consultant has investigated the unexpected contamination and provided recommendations for the management of necessary remedial work required to render the site suitable for the activity in accordance with any relevant NSW EPA adopted guidelines. A Clearance Certification from the contamination consultant must be submitted to the Accountable Lead prior to construction works re-commencing.	During Construction

ID	MM Name	Mitigation Measure	Timing
		Following completion of the remediation through implementation of the recommendations from the suitably qualified contamination consultation, a Site Remediation Validation Report, and an Environmental Management Plan (if applicable), are to be submitted to a NSW EPA-Accredited Site Auditor to confirm site suitability. A copy of the Site Remediation and Validation Report is also to be provided to the Accountable Lead and DoE's Post Approval and Compliance Team. A notice of completion of remediation work must also be given to Council in accordance with Section 4.14 and Section 4.15 of <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i>.	
LC5*	Long Term Environmental Management Plan	Preparation of an Environmental Management Plan (EMP) and submission of EMP to DoE's Post Approval and Compliance Team.	Prior to commencement of Operations
Soil and Water			
SW1	Erosion and Sediment Control	The Erosion and Sediment Control Plan required by Mitigation Measure C1 must be developed in accordance with the Landcom/Department of Housing <i>Managing Urban Stormwater, Soils and Construction Guidelines</i> (Blue Book). The controls must be in place, inspected and managed until the works are complete and all exposed erodible materials are stable relevant to each construction stage. Inspection records must be kept and provided to the Post Approval and Compliance Team on request.	During Construction
SW2	Imported Fill Material	Imported fill must be compatible with the existing soil characteristics of the site and limited to the following: (a) Virgin excavated natural material (VENM); and/or (b) Excavated natural material (ENM) certified as such in accordance with Protection of the Environment Operations (Waste) Regulation 2014; and/or (c) Material subject to a Waste Exemption under Clause 91 and Clause 92 of the Protection of the Environment Operations (Waste) Regulation 2014 and recognised by the NSW Environment Protection Authority as being "fit for purpose" with respect to the works under the REF. Certificates from a suitably qualified person/contractor proving that the imported fill material	During Construction

ID	MM Name	Mitigation Measure	Timing
		complies with these requirements must be provided to the Accountable Lead prior to filling works.	
SW3	Imported Mulch	Any imported mulch must comply with the <i>Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014</i> and the <i>Mulch Order 2016</i> recognised by the NSW Environment Protection Authority as being “fit for purpose” with respect to the works under the REF. Mulch must not include physical or chemical contaminants and minimise harm to the environment through the introduction, spread or increase in any weed, disease or pest. A written statement provided by the supplier confirming compliance with the <i>Resource Recovery Mulch Order 2016</i> is to be provided to the Accountable Lead prior to importing the mulch.	During Construction
SW4	Groundwater	Should any unexpected groundwater be encountered during construction works, works are to cease immediately. Where groundwater needs to be removed, an approval may be required under the <i>Water Management Act 2000</i> .	During Construction
SW5	Stormwater Management System	The operational stormwater management system must be designed by a suitably qualified civil engineer. The system must: (a) Ensure that the system capacity is designed in accordance with the relevant Australian Standards; and (b) Ensure that the system is designed in accordance with the <i>Australian Rainfall and Runoff (Engineers Australia, 2016)</i> and <i>Managing Urban Stormwater: Soil and Construction (Blue Book. 4th Edition, 2022)</i>. ~~(c) A surrounding solid kerb to direction microplastic loss exiting the sports field;~~ ~~(d) a closed drainage system that collects stormwater from the sports field with a minimum 200-micron terminal screen filter system to capture microplastics.~~	Design
SW6	Acid Sulfate Soils	The management of potential and actual acid sulfate soils must be conducted in accordance with <i>the Acid Sulfate Soil Assessment Guidelines (NSW Acid Sulfate Soils Management Advisory Committee, August 1998)</i> .	During Construction
SW7	Water Quality	Following the removal of any temporary erosion and sediment control measures, permanent water quality treatment measures, designed by a suitably qualified expert as part of water-sensitive urban design, must be implemented.	Design and during Operations

ID	MM Name	Mitigation Measure	Timing
Heritage			
H1	Unexpected Archaeological Relics	If any unexpected archaeological relic (or potential relic) of heritage significance is discovered during any construction work, all work in the vicinity must cease and the area must be appropriately protected. Materials should not be removed from the ground wherever possible. The DoE Heritage Team is to be notified, and an archaeologist engaged to undertake a site inspection to ascertain whether the finds are significant relics. Construction works cannot recommence in that area until advised by the archaeologist, in consultation with DoE's Heritage Team. Should significant relics be identified, external approvals to impact the relics may be required.	During Construction
H2	Unexpected Aboriginal Heritage	If any unexpected Aboriginal object/s, site/s or place/s (or potential Aboriginal objects, site or places) are discovered during any construction work, all works in the vicinity must cease and the area must be appropriately protected. The DoE Heritage Team is to be notified, and an archaeologist engaged to undertake a site inspection to assess the find in consultation with the Registered Aboriginal Parties (RAPs). Following the on-site assessment, the archaeologist and RAPs (if they attended the site) are to advise on whether further management, mitigation or approvals are required in consultation with DoE's Heritage Team. Should Aboriginal objects be identified, these are to be registered in the Aboriginal Heritage Information Management System (AHIMS). Impact to Aboriginal heritage sites would only proceed under an Aboriginal Heritage Impact Permit (AHIP).	During Construction
H3	Human Remains	If human remains are identified, work must cease and the area around where the remains are found must be protected from all disturbance. Finds are not to be displaced from the location where they are found. If human skeletal material less than 100 years old is discovered, the NSW Police are to be contacted in accordance with the <i>Coroners Act 2009</i> . The DoE Heritage Team is to be notified, and a specialist archaeologist engaged to assess the find. Aboriginal burials (older than 100 years) are protected under the <i>National Parks and Wildlife Act 1974</i> and should not be disturbed. Should the skeletal material prove to be archaeological Aboriginal remains, Heritage NSW and the Local Aboriginal Land Council must be notified. Notification should also be made to the Commonwealth Minister for the Environment, under the provisions of the <i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i> .	During Construction
H4*	Archival Recording	An archival recording of OGPS should be undertaken prior to the commencement of works for the whole of the project. The recording should be conducted in accordance with the appropriate Heritage NSW guidelines	Prior to Construction

ID	MM Name	Mitigation Measure	Timing
		for archival recordings. <u>The archival recording report must be reviewed by DoE Heritage prior to finalisation and submission.</u>	
H5*	Building J	Ensure glimpse views to Building A through the walkways between the stairwells and main structure of Building J are maximised by using lightweight balustrades and increasing the width of the gap. This will increase the permeability of the building and reduce its visual impact. <u>Design development and material selection of Building J, to improve glimpse views to Building A, should be conducted in consultation with DoE Heritage.</u>	During Detailed Design
H6*	Building J Mural	Ensure the future mural has a minimal visual impact by adopting a sympathetic or complimentary palette to Building A, B and D. <u>This palette should be developed in consultation with DoE Heritage.</u>	During Detailed Design / Construction
H7*	Heritage Interpretation	To mitigate the impact of Building J, provide heritage interpretation along the Perry Street boundary which interprets the history of the school and identifies the significance of Building A, B and D. <u>Heritage interpretation plans and proposals must be reviewed by DoE Heritage.</u>	During Detailed Design / Construction
H8*	Heritage Advice	A suitably qualified and experienced heritage expert <u>from DoE Heritage</u> should provide ongoing heritage advice during the construction phase of the upgrades to OGPS with the aim of reducing heritage impacts.	During Construction
Ecology			
E1	Tree Protection	Trees not approved to be pruned or removed are to be protected and maintained in accordance with <i>AS 4970-2009 Protection of Trees on Development Sites</i> . Tree protection must be approved by a Consulting Arborist AQF Level 5. Protections are to remain in place until the completion of all construction work in the vicinity of the protected trees. <u>I. The retention and protection of the following trees as construction will not impact them:</u> <u>a. High Significance Trees: 15, 57, 60, 85</u> <u>b. Medium Significance Trees: 32, 38, 42, 54, 55, 56, 58, 59, 61, 62.</u> <u>c. Low Significance Trees: 19, 22, 23, 30, 36, 37, 39, 40, 82, 83.</u> <u>II. The retention and protection of Tree No.'s 16, 18, 20, 25, 29, 31, 33, 34, 35, 41, 64, 65, 66 & 84.</u> <u>The construction will provide a minor encroachment into the tree protection zone.</u> <u>The activity is to be undertaken generally in accordance with the particular recommendations set</u>	During Construction

ID	MM Name	Mitigation Measure	Timing
		<u>out in the Arboricultural Impact Assessment.</u>	
E2	Tree Removal or Pruning	Tree pruning or removal is to be carried out by an Arborist with a minimum AQF Level 3 qualification in Arboriculture. Any tree pruning must be in accordance <i>AS 4373-2007 Pruning of amenity of Trees</i>. Immediately prior to tree removal, an ecologist or similarly qualified personnel must inspect for the presence of fauna, and capture and relocate as required. Where nesting or habitat hollows are present on trees being removed, this section of the tree must be removed and re-used on site or in the local area.	During Construction
E3	Pre-Clearance Survey	Pre-clearance surveys of potential habitat (e.g. trees for nesting birds/arboreal mammals) must be undertaken by a suitably qualified Ecologist.	48 hours prior to commencement of habitat clearing
E4	Unexpected Native Fauna	If any unexpected native fauna is found on the site during any construction work, work in the vicinity must stop until an ecologist or similarly qualified person captures and relocates the fauna.	During Construction
E5	Weed and Pathogen Management	Not used.	
E6	Replacement Planting	Removal of native vegetation for construction must be replaced by trees at a ratio of a minimum of 1:1	During Construction
E7*	Sewer, Stormwater & Electrical trenching Layout (Trees 17, 25, 67, 70 & 77)	(I). The retention and protection of Tree No.'s 67, 70 & 77 – by the following tree-sensitive Stormwater, water, sewer pipe & electrical conduit layout and installation: a. Conduit layout i. Where possible, pipes could be located within existing building footprints rather than trenching outside the buildings. ii. If not, the path of the conduit should be deflected to be under the paved covered area of the building proposed in a separate application (Building K). b. Excavation Methodology i. Directional, thrust or other trenchless methods at a depth of greater than 800mm within the TPZ	Design

ID	MM Name	Mitigation Measure	Timing
		should be considered to avoid root damage. ii. If not, the conduit should be located as close as possible to building K and as shallow as possible using non-destructive excavation i.e. air spade to avoid cutting roots. Air spade is preferable to water lance as it is less likely to damage or strip root bark. iii. Timing and methods to prevent root desiccation (covering/wrapping roots with damp sand, potting mix or hessian) between trench excavation and backfill. iv. All works to be directed on site and supervised by a AQF Level 5 project arborist. v. Backfill suitable for root growth should be used – e.g sand with some ameliorants, not recycled concrete. vi. Soil moisture monitoring and irrigation, application of biological stimulants as recommended by the Project Arborist. vii. The pipes for any future services should be installed as close as possible to this conduit. (II) T25 - Sewer line located at a minimum of 5.1m from north face of trunk. This assumes a 1.5m trench width and closest cut no closer than 4.4m to face of trunk. If the trench must be wider, the location of the pipe should be further from the face of trunk at a distance to achieve the 4.4m minimum from trenchworks, and (III) T25 - Stormwater line located so that closest line of trenching cut is outside the TPZ, i.e. a minimum of 7.0m from east face of trunk- i.e. as close to Building J footprint as possible.	
E8*	Decking, Retaining wall, permeable paving & garden design	I. Design documents around Tree 17 should be co-ordinated to protect roots, trunk and crown of Tree No. 17 as follows: a. Levels of new garden to be similar to the existing garden. This may involve the grading of added soil levels outside the existing footprint to new wall – to limit excessive fill in these areas. b. Levels of new permeable paving and combined profile of paving material + base to provide no excavation deeper than the underside of the existing asphalt, pending investigation of existing root distribution. Sub-base under paving should not be overly compacted; it should be 'consolidated'. Base used should be of gap-graded crushed rock in preference to recycled concrete; and substances added to promote and optimise tree growth as advised by the project arborist (refer to item 8, below). c. Discontinuous ('pier' or 'spot') footings to be used for retaining walls, not continuous strip	Design

ID	MM Name	Mitigation Measure	Timing
		footings. The placement of footings is to avoid major roots. d. The placement and excavation of garden drainage is to avoid major roots. e. A design which provides for flexibility to be adjusted to live, timely feedback from 'found' tree and tree root data during pre-demolition root investigation, demolition and construction stages. f. Where root pruning cannot be avoided, timing and methods to prevent root desiccation should be implemented (covering/wrapping roots with damp sand, potting mix or hessian) between demolition/pavement lifting and construction. Records of roots retained and removed and/or damaged are to be made by the project arborist. g. Planting and mulching of the new garden should be as per E10: a)-g) to minimise root damage. h. Monitoring and maintenance of soil moisture levels to achieve during works and for a minimum period of 6 months after conclusion of works. Optimal range of soil moisture levels are considered to be in the range of -2kPa to -100kPa as measured by a tensiometer. i. Application of Biological stimulants, humic acids, beneficial microbes ('probiotics'), suitable food ('prebiotics') and other ameliorants should be included in paving base and garden bed media, as advised by the Project Arborist. To be applied during works and for a minimum period of 6 months after conclusion of works. j. The bearer and/or joist framing supporting the proposed raised RPF/metal mesh decking shall be designed to provide an air gap between existing garden surface levels and underside of bearers, with no excavation, especially within the SRZ. k. A minimum of 300mm air gap should be provided under decking. l. Supporting posts for the proposed raised RPF/metal mesh decking nearest the tree should be located to avoid large woody roots. Initial exploratory excavations should be carried out by hand under Project Arborist supervision and direction. m. Final support post locations to follow root location (mapping) under project arborist supervision. n. Construction of surrounding concrete steps/stairs should be supported by piers and shallow slab footings to require discontinuous deep footings and shallowest possible requirement for scraping/excavation for continuous concrete slab. II. Paving design documents should be co-ordinated to protect roots, trunk and crown around Trees 26, 27 & 28 as follows: a. Levels of new permeable paving and combined profile of paving material + base to provide no excavation deeper than the underside of the existing asphalt, pending investigation of existing root	

ID	MM Name	Mitigation Measure	Timing
		distribution. Sub-base under paving should not be overly compacted; it should be 'consolidated'. Base used should be of gap-graded crushed rock in preference to recycled concrete; and substances added to promote and optimise tree growth as advised by the project arborist (refer to item 8, below).	
E9*	Construction Methodology (Trees 16, 17, 26, 27, 28, 64, 67, 70 & 77)	No soil compaction and careful, non-destructive excavation of soil containing roots within the TPZ (especially the SRZ).	Design
E10*	Garden Bed Design (Trees 71, 72, 73, 74, 75, 76, 77 & 78)	Protect these trees from landscape impacts by the following barriers, design and methodologies: a. Trunk protection is to be installed prior to commencement of landscape works. b. No skid-steer, back-hoes or heavy materials-handling equipment is permitted outside the existing hardstand area within the Tree Protection Zone: All landscaping works within the TPZ of these trees is to be undertaken with hand tools and light material handling equipment only (e.g. wheelbarrows, trugs, wheelie-bins etc). c. Garden edging should be carefully installed at grade without excavation. d. Ground preparation should involve minimal soil disturbance such as rotary hoeing, ripping, excavation and soil replacement. It should be localised around the individual planting and organic composts and mulches confined to the surface of the soil profile. e. Mulch should be a coarse, porous, largely woody material; mulch depth should not exceed 75mm and not be laid against tree trunks. To enhance and maintain organic matter, gaseous exchange, nutrient cycling and water holding capacity. f. Understorey planting arrangements should be not too dense – maximum 2 plants per square metre, and not within the SRZ of trees (refer to Tree Data Table). To provide the least root damage in short term and not excessive competition in the medium to long term. g. Plant stock should be a small size – preferably 75mm diameter or 'forestry tubestock' and no larger than 150mm diameter pots. Generally, the replacement planting of 1 or more canopy tree shall be installed in 25L pot size to offset the loss of canopy from removal of Tree 24. Adequate soil volume and quality should be specified to allow the tree(s) to attain their full size and provide maximum possible ecosystem services.	Design

ID	MM Name	Mitigation Measure	Timing
E11*	Construction Methodology (Tree 16)	The retention and protection of Tree No. 16 (Heritage Tree, high significance). I. Roof replacement demolition and construction operations should be planned that no interaction with branches and foliage (crown) occurs. No pruning of this tree should be carried out. II. Finalise detailed construction design and methodology so that deployment of Elevating Work Platform (EWP) (or similar) or roofing material will not touch branches or leaves of Tree 16.	Design
E12*	Project Arborist	A Project Arborist be appointed to oversee, regularly inspect, and provide on-site advice plus reportage for all works in proximity to trees. I. A site specific Tree Protection Plan should be prepared to guide: (A) construction final design and methodology; (B) Tree Protection barrier installation, and; (C) the Project Arborist supervision/direction as necessary to protect the trees during construction works. The plan should be prepared following provision of a CMP (Construction Management Plan) and/or TMP (Traffic Management Plan), in liaison with Construction plans and consistent with any conditions of consent and AS4970, sections 4 & 5. II. Root Mapping to verify major roots in areas of post support footings for decking or retaining walls in or close to the SRZ, under project arborist supervision prior to finalisation of detailed design and construct drawings as the proposed works will constitute a major encroachment within the TPZ. III. Any earthworks within the TPZ of retained trees should be carried out under project arborist supervision by first excavating a narrow trench to the depth required by hand or equivalent. Severing roots by earthmoving equipment is unacceptable. IV. If revision is undertaken of any architectural, Civil, landscape, construction and service plans, liaison should be made with the Project Arborist. This arboricultural impact assessment (AIA) should be revised immediately following such. V. This arboricultural assessment should be reviewed upon the preparation of stormwater, landscape, revised architectural, civil, hydraulic or service plans. VI. Demolition and Construction: Pedestrian and machinery access, material storage and other construction activities which compact the soil should be designated to be outside of TPZs of all retained trees.	During Construction
E13*	Hygiene	Appropriate hygiene measures such as vehicle and equipment cleaning protocols are to be implemented to ensure that operations within the Study Area do not contribute to the	During Construction

ID	MM Name	Mitigation Measure	Timing
		encouragement or spread of feral pest, disease or weed species.	
E14*	Landscaping	For the landscaping/ offset planting that is proposed as part of the project, native vegetation representative of the nearest mapped native community, Sydney Turpentine Ironbark Forest, should be prioritised. Species for consideration include: Canopy: • <i>Syncarpia glomulifera</i> • <i>Angophora costata</i> • <i>Notelaea longifolia</i> • <i>Allocasuarina torulosa</i> • <i>Eucalyptus pilularis</i> Mid strata: • <i>Pittosporum undulatum</i> • <i>Leucopogon juniperinus</i> • <i>Hibbertia aspera</i> • <i>Ozothamnus diosmifolius</i> Ground: • <i>Microlaena stipoides</i> • <i>Lomandra longifolia</i> • <i>Entolasia stricta</i> • <i>Themeda triandra</i>	During Construction
Visual Amenity			
VA1	External Materials	The selection of external colours, materials or finishes of the building(s) should aim to minimise impacts on visual amenity and ensure there is no increase in impacts identified in the visual amenity assessment in the REF. Note: For clarification on the requirements please refer DoE's School Infrastructure Pattern Book	Design

ID	MM Name	Mitigation Measure	Timing
		and <i>Educational Facilities Standards and Guidelines (EFSG) Technical Standards</i> .	
Sustainability			
S1	Green Star Certification	Green Star Certification must be obtained demonstrating that the activity achieves a minimum 5 star rating. Evidence of the certification must be provided to DoE's Sustainability Team. For enquiries on requirements please contact the DoE's Sustainability Team on Sustainability.ESD@det.nsw.edu.au.	Within 12 months of commencement of Operations
Operational Management			
OM1	Operational Waste Management Plan	Operational waste management measures must be detailed in an Operational Waste Management Plan. This Plan must outline how waste will be minimised, handled, stored, recycled and disposed of appropriately, in accordance with any relevant guidelines. A copy of the Operational Waste Management Plan is to be provided to the Accountable Lead.	Prior to commencement of Operations
OM2	Operational Waste Management Plan	Waste must be maintained in accordance with the Operational Waste Management Plan.	During Operations
OM3	Operational Stormwater Management Plan	A Stormwater Operation and Maintenance Plan is to be prepared by a suitably qualified person and include the following: (a) Maintenance schedule of all stormwater quality treatment devices, On-Site Detention, drainage infrastructure and overland flow paths; (b) Record and reporting details; and (c) Work Health and Safety requirements. A copy of the Stormwater Operation and Maintenance Plan is to be provided to the Accountable Lead.	Prior to commencement of Operations
OM4	Operational Stormwater Management Plan	Stormwater must be maintained in accordance with the Operational Stormwater Management Plan.	During Operations

ID	MM Name	Mitigation Measure	Timing
OM5	Flood Emergency Response Plan	Not used.	
OM6	Flood Emergency Response Plan	Not used.	
OM7	Operational Plant and Machinery	All operational plant and equipment must be maintained and operated in a proper and efficient manner and in accordance with the user manual.	During Operations
OM8	Landscape Management	Landscaping at the site under the management of DoE must be maintained. This includes the undertaking of: (a) Mulching (b) Concrete/paving maintenance and replacement (c) Outdoor furniture maintenance and replacement (d) Turf replacement (e) Planting and tree replacement (f) Planting and tree maintenance (trimming) (g) Watering (h) Irrigation maintenance (i) Mowing (j) Spraying and pest treatment.	During Operations

Note: * represents a Bespoke MM identified, in addition to the Standard MMs, to manage a project-specific impact. ~~Strikethrough~~ text is part of a Standard MM that does not apply to this project. Underlined text has been added to a Standard MM to capture project-specific elements and considerations for that measure.

Dictionary

Term	Definition
Aboriginal object	Has the same meaning as the definition of the term in Section 5 (Definitions) of the <i>National Parks and Wildlife Act 1974</i> .
Aboriginal place	Has the same meaning as the definition of the term in Section 5 (Definitions) of the <i>National Parks and Wildlife Act 1974</i> .
Accountable Lead	The DoE primary contact for the project i.e. Project Director or Senior Group Leader.
Bushfire prone land	Land mapped on a bushfire prone land map as being subject to bushfire hazard. If part but not all of a lot is mapped as being subject to bushfire hazard, only the specific part of the lot that is mapped as being subject to bushfire hazard is bushfire prone land.
Category 1 Remediation	Remediation work needing development consent as defined by clause 4.8 of the State Environmental Planning Policy (Resilience and Hazards) 2021
Category 2 Remediation	Remediation work not needing development consent as defined by clause 4.11 of the State Environmental Planning Policy (Resilience and Hazards) 2021
Crown certificate	Certification under section 6.28(2) of the <i>Environmental Planning and Assessment Act 1979</i> .
Construction	All physical work to enable operation including, but not limited to, the demolition and removal of buildings, the carrying out of works for the purposes of the activity, including bulk earthworks, and erection of buildings and other infrastructure permitted by this REF determination, but excluding: • Dilapidation surveys • Investigative drilling or investigative excavation • Archaeological salvage • Establishing temporary site offices • Installation of environmental impact mitigation measures, fencing, enabling works • Minor adjustments to services or utilities.
Green Star	The building sustainability rating scheme managed by the Green Building Council of Australia.

Term	Definition
Pollution Incident	An occurrence or set of circumstances that causes, or threatens to cause material harm and which may or may not be, or cause, a non-compliance.
Material Harm	Material harm is harm that: a) Involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial; or b) Results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practical measures to prevent, mitigate or make good harm to the environment. c) Consistent with the definition in the <i>Protection of the Environment Operations Act 1997</i> .
Suitably qualified person	A professional with the necessary qualifications having regard to the nature of the technical services.